

REMARKS/ARGUMENTS

Claims 1-20 are pending in this application. By this Amendment, the specification and claims 1-4, 6 and 7 are amended for clarification purposes, and claims 9-20 are added. No new matter is added. Support for the claims can be found throughout the specification, including the original claims and the drawings. Withdrawal of the rejections in view of the above amendments and the following remarks is respectfully requested.

I. Rejection Under 35 U.S.C. §102(b)

The Office Action rejects claims 1-4 and 6-8 under 35 U.S.C. §102(b) over U.S. Patent No. 6,103,017 to Thies et al. (hereinafter "Thies"). The rejection is respectfully traversed.

Independent claim 1 is directed to a dishwasher, comprising, *inter alia*, a drain passage with a first end in communication with a drain pump, and a second end in communication with a backflow-preventing passage. Claim 1 recites that the drain pump is provided at a side of the sump. Claim 1 recites that the backflow-preventing passage includes an inverted U-shaped portion which forms a peak point, wherein an inlet of the backflow-preventing passage is connected to the second end of the drain passage so as to prevent water from flowing backward. Claim 1 further recites that an upper portion of the backflow- preventing passage is disposed higher than the sump. Claim 1 also further recites a drain hose having an inlet end connected to an outlet of the backflow-preventing passage.

In contrast, Thies discloses a soil separator/pump assembly 20 for a dishwasher 10. During a wash cycle, a wash impeller 32 draws wash water from a sump 18 and disperses it

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through spray arms 22 and 42. A separate drain pump 54 facilitates the draining of used wash water. As illustrated in the cross sectional views shown in Figures 2, 4 and 5 of Thies, the drain pump 54 is positioned below the sump 18, and not to a side of the sump 18, as is the drain pump recited in independent claim 1.

In the Thies dishwasher, as the wash water flows down, off of the dishes for recirculation, the wash water enters a chopper assembly 70 prior to entering the pump, where rotation of the impeller 32 causes centrifugal separation of the particles. More heavily soiled water is directed through a soil separation channel 46, where water flows up through a filter screen 48 and back into the sump 18, while particles are directed into a soil accumulator 50. A pressure sensor 52 senses pressure in the soil accumulator 50, and, when the pressure in the soil accumulator 50 exceeds a predetermined threshold, a drain pump 54 draws the soiled liquid from the accumulator 50 through a drain conduit 55, past a check valve 56, and out through a drain hose 58. The drain pump 54 continues to operate until the accumulator 50 and filter screen 48 are cleared and the pressure falls below the threshold.

The drain pump 54 may also be used to drain the sump 18 through a drain port 62. However, in order to maintain effective flushing of the accumulator 50 and filter 48, the drain port 62 remains closed through the action of a pressure operated control valve 60 including a moveable stem 61 and plug seal 63 (see column 5, lines 56-65 of Thies for a detailed explanation of the operation of the pressure valve 60). To drain the sump 18 at the end of a wash cycle, the valve stem 61 is biased upward, thus raising the plug seal 63 above the drain port 62 and allowing the used wash water to flow into the drain conduit 55, past the check valve 56 and out

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through the drain hose 58. Thus, when draining either the soil accumulator 50 or the sump 18, used wash water passes into a portion of the drain conduit 55 and through the check valve 56 for draining through the drain hose 58. In order to maintain appropriate pressure within these fluid lines, the end of the drain hose 58 includes a loop and another check valve 57. This precludes unwanted introduction of accumulator 50 contents into the drain pump 54, or draining of the tub 12 as soon as the drain pump 54 is energized (see column 5, lines 14-26 of Thies).

It appears the Examiner has drawn a comparison between the drain hose 58 disclosed by Thies and the drain passage recited in independent claim 1, in order to compare this loop and check valve provided at the end of the drain hose 58 and the backflow-preventing passage and check valve, respectively, recited in independent claim 1. However, it is respectfully submitted that the drain hose 58 disclosed by Thies is more appropriately compared to the drain hose recited in independent claim 1, both in structure and function. Further, the drain conduit 55 disclosed by Thies is more appropriately compared to drain passage recited in independent claim 1.

Given these comparisons, Thies neither discloses nor suggests any type of backflow-preventing passage with its inlet connected to the drain conduit 55, and its outlet connected to the drain hose 58, as recited in independent claim 1. Further Thies does not disclose that an upper portion of a backflow-preventing passage is disposed higher than the sump, as also recited in independent claim 1. Rather, in the Thies dishwasher, the only components disclosed by Thies which are interposed between the drain conduit 55 and the drain hose 58 is the drain

pump 54 and check valve 56, and each of these components is disposed below the sump 18.

Further, in the dishwasher disclosed by Thies, it is the drain hose 58 that includes an inverted U-shaped portion. Thies neither discloses nor suggests that the drain conduit 55 (comparable to the recited drain passage) includes an inverted U-shaped portion, as does the drain passage recited in independent claim 1 (see also, Figure 2 of Thies as compared to Figures 3-7 of the present application). Because, in the Thies dishwasher, this inverted U-shaped portion is in the drain hose 58, rather than in the drain conduit 55, residual water would be left in the drain hose 58 when the dishwasher is not in operation. In contrast, in the dishwasher recited in independent claim 1, the position of the inverted U-shaped portion in the drain passage precludes residual washing fluid from being left in the drain hose.

However, even if one were to inappropriately compare the drain hose 58 disclosed by Thies with the drain passage recited in independent claim 1, and the loop shown at the end of the drain hose 58 with the upper portion of the backflow-preventing passage recited in independent claim 1, Thies still neither discloses nor suggests a backflow-preventing passage as recited in independent claim 1. That is, if the partial loop formed at the end of the drain hose 58 is to be compared to the inverted U-shaped portion of the backflow-preventing passage, then the inlet of this loop must be connected to the end of the drain passage, and the outlet of this loop (considered the open end shown in Figure 2 of Thies) must be connected to a drain hose, as recited in independent claim 1. However, because the drain hose 58 is considered the drain passage in this comparison, Thies fails to disclose or suggest any type of (additional) drain hose which may be connected to the outlet of the loop. Thus, even in this instance, Thies neither

discloses nor suggests a backflow-preventing passage as recited in independent claim 1.

Additionally, it is noted that paragraph [8] of the present application states that backflow of water can contaminate the sump and washtub, resulting in stagnant water, unsanitary conditions, and a foul odor, and thus in paragraph [10] sets forth to minimize an amount of water flowing backwards towards the sump and collected in a drain passage. In the dishwasher recited in independent claim 1, this is accomplished with a single check valve provided proximate the inlet of the backflow preventing passage, the backflow preventing passage being disposed between the drain passage (downstream of the pump) and the drain hose. In contrast, the dishwasher disclosed by Thies requires the use of two separate check valves 56 and 57 disposed on opposite sides of the drain pump 56 to run a draining operation. However, even with the use of two valves 56 and 57, there is still residual water left in the portion of the drain hose 58 which extends between the pump 54 and the check valve 57. Thus, if the drain hose 58 disclosed by Thies is to be improperly compared to the drain passage recited in independent claim 1, then Thies fails to accomplish that which is set out in the present application.

Accordingly, it is respectfully submitted that independent claim 1 is not anticipated by Thies, and thus the rejection of independent claim 1 under 35 U.S.C. §102(b) over Thies should be withdrawn. Dependent claims 2-4 and 6-8 are allowable over Thies at least for the reasons set forth above with respect to independent claim 1, from which they respectively depend, as well as for their added features.

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II. Rejection Under 35 U.S.C. §103(a)

The Office Action rejects claim 5 under 35 U.S.C. §103(a) over Thies. The rejection is respectfully traversed.

Dependent claim 5 is allowable over Thies at least for the reasons set forth above with respect to independent claim 1, from which it depends, as well as for its added features. Further, it is respectfully submitted that it would not have been obvious to modify the dishwasher disclosed by Thies in the manner suggested in the Office Action. Accordingly, it is respectfully submitted that claim 5 is allowable over Thies, and thus the rejection of claim 5 under 35 U.S.C. §103(a) over Thies should be withdrawn.

III. New Claims 9-20

New claims 9-20 are added to the application. It is respectfully submitted that new claims 9-20 also define over the applied prior art and meet the requirements of 35 U.S.C. §112.

CONCLUSION


In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition for allowance, the Examiner is invited to contact the undersigned, **JOANNA K. MASON**, at the telephone number listed below.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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